

Concepts and Principles of the Standardized Field Sobriety Tests (SFST)



Session Objectives

Upon successfully completing this session, the participant will be able to:

- Discuss the development and validity of the research and the standardized elements, clues and interpretation of the three standardized field sobriety tests.
- Discuss the different types of nystagmus and their effects on the horizontal gaze nystagmus test.
- Discuss and properly administer the three standardized field sobriety tests.

Session Objectives

*Upon successfully completing this session,
the student will be able to:*

- Discuss and recognize the clues of the three standardized field sobriety tests.
- Describe in a clear and convincing manner and properly record the results of the three standardized field sobriety tests on a standard note taking guide.
- Discuss the limiting factors of the three standardized field sobriety tests.

Overview:

Development and Validation

**NHTSA Research Began in 1975 in California
With Three Final Reports Being Published:**

- 1. California: 1977 (lab study only)**
- 2. California: 1981 (lab/field study)**
- 3. Maryland, Washington, DC, Virginia, North Carolina: 1983 (field study only)**

Original Research Objectives

- To evaluate currently used physical coordination tests to determine their relationship to intoxication and driving impairment.
- To develop more sensitive tests that would provide more reliable evidence of impairment.
- To standardize the tests and observations.

Volunteers were Subjected to Six Tests:

- 1. One-leg stand**
- 2. Finger to nose**
- 3. Finger count**
- 4. Walk and turn**
- 5. Tracing (a paper and pencil exercise)**
- 6. Nystagmus (called alcohol gaze nystagmus in final report)**

Laboratory Test Data

Results

- HGN by itself was 77% accurate.
- Walk and Turn was 68% accurate.
- One Leg Stand was 65% accurate.
- It would be possible to combine the results of HGN and Walk and Turn and be 80% accurate.

Third Phase: Field Validation and Standardization

Objectives:

- **To develop standardized, practical and effective procedures for police officers to use in reaching arrest/no arrest decisions.**
- **To test the feasibility of the procedures in operational conditions.**
- **To secure data to determine if the tests will discriminate in the field, as well as in the laboratory.**

“Standardized” Elements

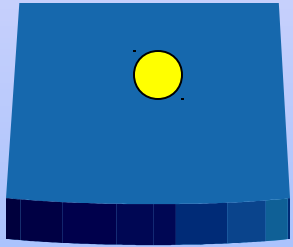
- **Standardized Administrative Procedures**
- **Standardized Clues**
- **Standardized Criteria**

Importance of Large Scale Field Validation Study

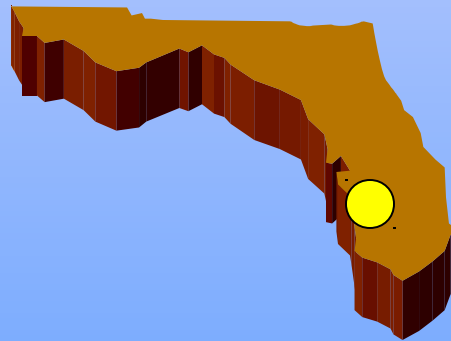
- **First significant assessment of the workability of the standardized tests under actual enforcement conditions.**
- **First time completely objective clues and scoring criteria had been defined for the tests.**
- **Results of the study validated the SFSTs.**

SFST

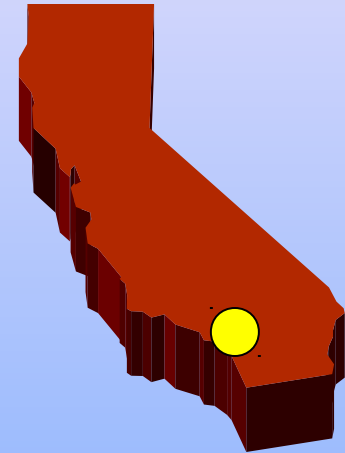
Field Validation Studies



Colorado
1995



Florida
1997



San Diego, California
1998

Colorado Field Validation Study of SFST

- **First full field validation study using SFST experienced law enforcement personnel.**
- **93% correct arrest decision based on three-test battery (HGN, WAT, OLS).**

Florida Field Validation Study of SFST

- **95% correct arrest decision based on three-test battery (HGN, WAT, OLS).**
- **Validated SFST's at 0.08 BAC and above.**

San Diego Field Validation Study of SFST

- **91% correct arrest decision for 0.08 BAC and above using three-test battery (HGN, WAT, OLS).**
- **HGN is still most reliable of three-test battery and supports arrest decisions at 0.08 BAC.**

Horizontal Gaze Nystagmus



Involuntary jerking of the eyes occurring as the eyes gaze to the side.

Categories of Nystagmus

- **Vestibular**

- Rotational
- Post-rotational
- Caloric
- Positional alcohol nystagmus

- **Neural**

- Optokinetic
- Physiological
- Gaze
 - Horizontal
 - Vertical
 - Resting

- **Pathological disorders and diseases**

Administrative Procedures

1. Eyeglasses
2. Verbal instructions
3. Position object (12-15 inches) (30-38 cm)
4. Pupil size and resting nystagmus
5. Equal tracking



Administrative Procedures

6. Check for lack of smooth pursuit



7. Check for distinct and sustained nystagmus at maximum deviation

8. Check for onset of nystagmus prior to 45 degrees

9. Total the clues

10. Check for Vertical Gaze Nystagmus

Check each eye independently beginning with the suspect's left and compare.

Three Clues of Horizontal Gaze Nystagmus

- Lack of smooth pursuit.
- Distinct and sustained nystagmus at maximum deviation.
- Onset of nystagmus prior to 45 degrees.

Clue Number 1



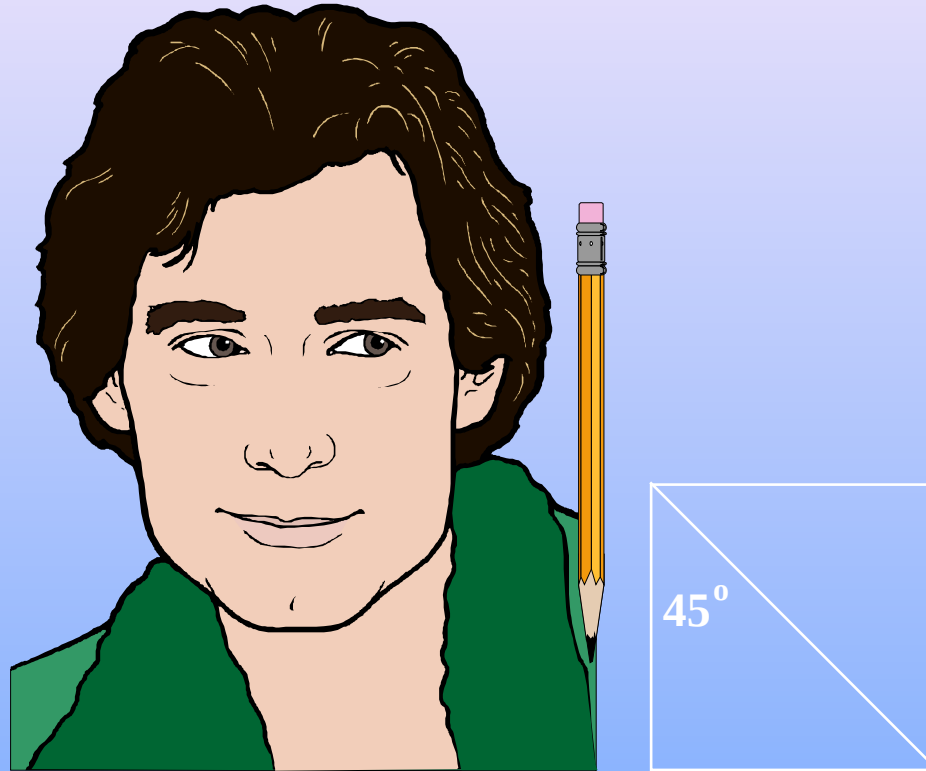
Lack of smooth pursuit

Clue Number 2

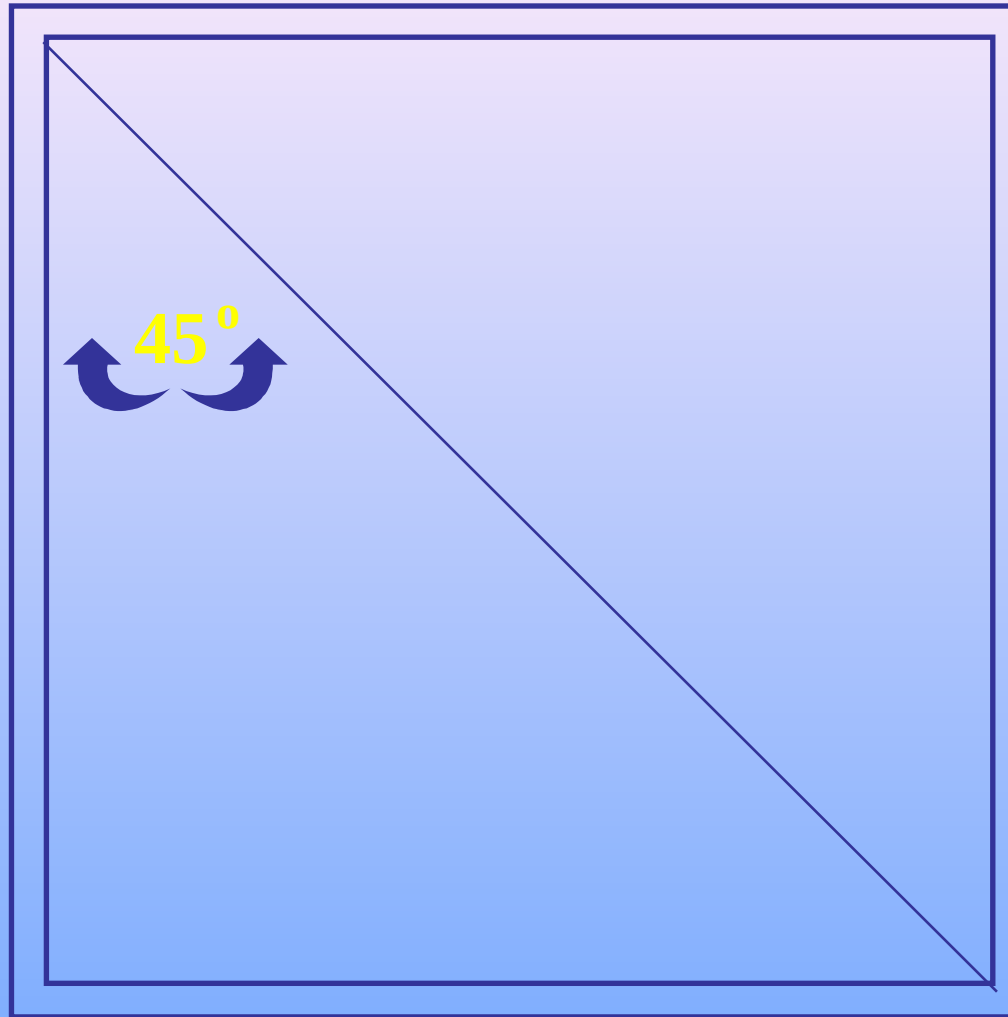


**Distinct and sustained
nystagmus at maximum deviation**

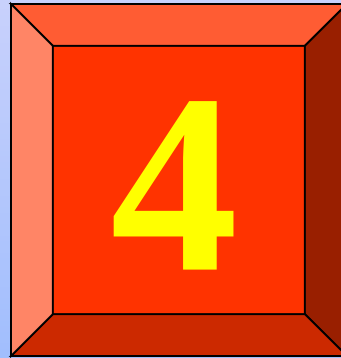
Clue Number 3



Onset of nystagmus prior to 45 degrees



Horizontal Gaze Nystagmus Test Criterion



**4 or more clues indicates BAC above 0.10
(77% accurate)**

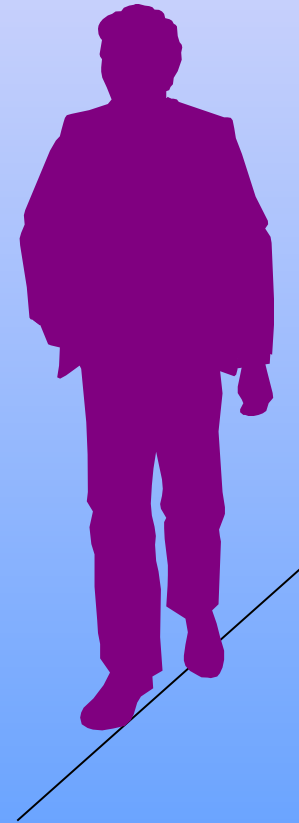
Vertical Gaze Nystagmus



Walk and Turn

(Divided Attention Test - Mental Task and Physical Task)

- Instructions Stage
- Walking Stage



Safety Precautions

- Keep suspect on left side during demonstrations
- Never turn back on suspect
- Be aware of surroundings
- Left handed officers should demonstrate test at a distance more than arm's length

Administrative Procedures

1. Verbal Instructions:

- Assume heel-toe stance**
- Arms down at sides**
- Don't start until told**

2. 9 heel-to-toe Steps, Turn, 9 heel-to-toe Steps

3. Turn Procedures:

- Turn around on line**
- Several small steps**

4. While Walking:

- Keep watching feet**
- Arms down at sides**
- Count steps out loud**
- Don't stop during walk**

Walk and Turn Test Clues

1. Can't balance during instructions
2. Starts too soon
3. Stops while walking
4. Doesn't touch heel-to-toe

Walk and Turn Test Clues

5. Steps off line

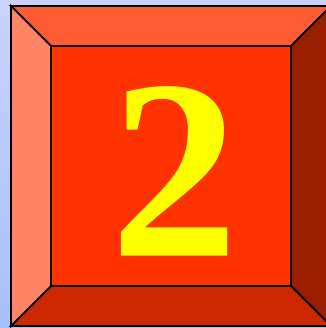
6. Uses arms to balance

7. Improper turn (or loses balance on turn)

8. Wrong number of steps

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test.

Walk and Turn Test Criterion



2 or more clues indicates BAC above 0.10
(68% accurate)

One-Leg Stand

(Divided Attention Test -
Mental Task and Physical Task)

- Instructions Stage
- Balance and Counting Stage



Administrative Procedures

Instructions Stage:

- Stand straight, feet together**
- Keep arms at sides**
- Maintain position until told otherwise**

Administrative Procedures

Balance and Counting Stage:

- Raise one leg, either leg
- Keep raised foot approximately six inches (15 cm) off ground, foot parallel to the ground
- Keep both legs straight
- Keep eyes on elevated foot
- Count out loud in the following manner: “One thousand and one, one thousand and two, one thousand and three and so on”, until told to stop

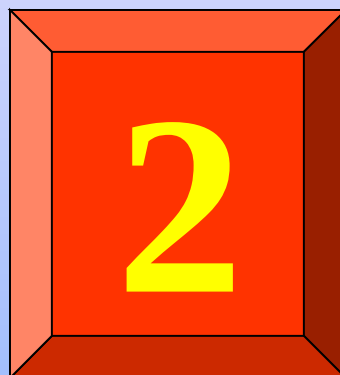
Note: It's important for the officer to time the 30 second count for the test.

One-Leg Stand Test Clues

- **Sways while balancing**
- **Uses arms to balance**
- **Hops**
- **Puts foot down**

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test.

One-Leg Stand Test Criterion



**2 or more clues indicates BAC above 0.10
(65% accurate)**

Medical Assessment

• **Equal Tracking**

☐

Yes

☐

No

• **Equal Pupil**

☐

Yes

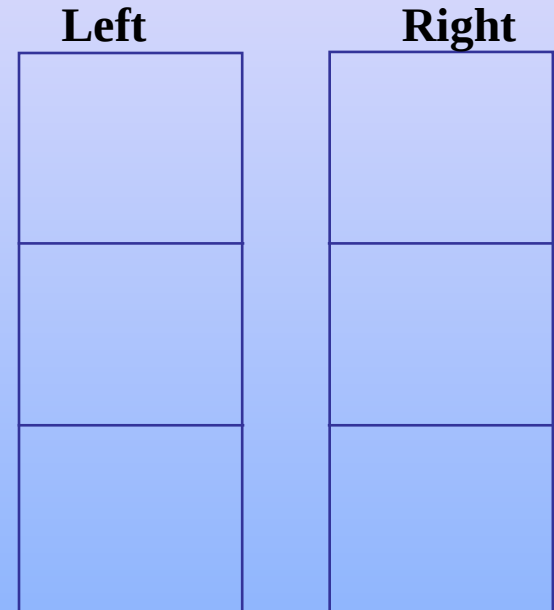
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No

Other:

Horizontal Gaze Nystagmus

- Lack of smooth pursuit
- Distinct and sustained nystagmus at maximum deviation
- Onset of nystagmus prior to 45 degrees



Walk and Turn

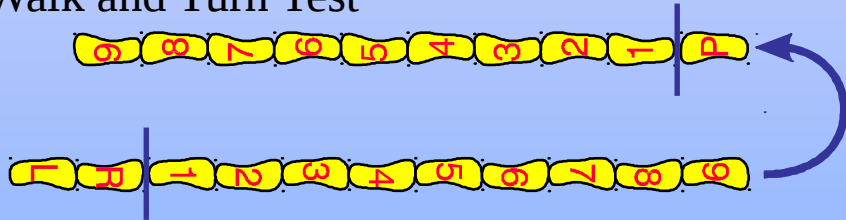
Instructions Stage

Cannot Keep Balance

Starts Too Soon

Walking Stage

Walk and Turn Test



Cannot keep balance

Starts too soon

Stops walking
Misses heel-toe
Steps off line
Raises arms
Actual steps taken

1st Nine	2nd Nine
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Describe Turn

Cannot Do Test (Explain)

Improper Turn (Describe)

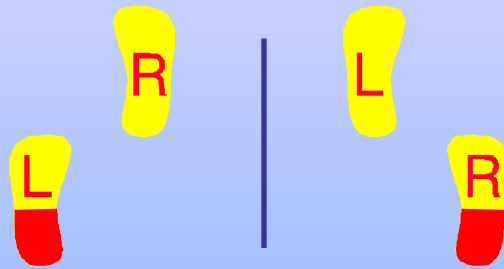
Cannot Do Test (Explain)

Other:

* For scoring purposes, “Wrong number of steps is a validated clue.”

One-Leg Stand

One-Leg Stand:



- | L | R | |
|--------------------------|--------------------------|------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sways while balancing |
| <input type="checkbox"/> | <input type="checkbox"/> | Uses arms to balance |
| <input type="checkbox"/> | <input type="checkbox"/> | Hopping |
| <input type="checkbox"/> | <input type="checkbox"/> | Puts foot down |

Test Your Knowledge

- Walk-and-Turn is an example of _____ field sobriety test.
- The Walk-and-Turn requires a real or imaginary line and _____
- During the _____ stage of the Walk-and-Turn, the suspect is required to count out loud.

Test Your Knowledge

- Per the original research, the Walk-and-Turn can determine whether a suspect's BAC is above or below 0.10, _____ percent of the time.
- In the Walk-and-Turn test, a suspect who steps off the line during the first 9 steps and once again during the second 9 steps and who raises arms for balance twice during the second 9 steps has produced _____ distinct clue(s).

Test Your Knowledge

- The Walk-and-Turn may not be valid when administered to persons who are over _____ years of age.
- During the _____ stage of the One-Leg Stand the suspect must maintain balance for 30 seconds.
- The One-Leg Stand requires that the suspect keep the foot elevated for _____ seconds.

Test Your Knowledge

- Per the original research, the One-Leg Stand can determine whether a suspect's BAC is above or below 0.10, _____ percent of the time.
- In the One-Leg Stand test, a suspect who sways has exhibited _____ clue(s).
- In the One-Leg Stand test, a suspect who raises arms, hops, and puts foot down has exhibited _____ clue(s).

Test Your Knowledge

- The maximum number of clues for Horizontal Gaze Nystagmus that can appear in one eye is_____.
- Per the original research, the HGN test can determine whether a suspect's BAC is above 0.10, _____ percent of the time.
- The third clue of HGN is an onset of nystagmus prior to _____ degrees.